The Resonator

Official Newsletter of the Fair Lawn (NJ) Amateur Radio Club

Volume 10, Number 12 **www.FairLawnARC.org** **December 2025**

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Remember:
Ham Radio Is a Contact Sport!

President's Message

Hello all FLARC Members,

Hello and Goodbye for the year 2025. By the time the December Resonator newsletter comes out I will no longer be your President. I will be your 2026 Vice-President under the leadership of Nomar, NP4H. I think as President this past year I did a good job? At the end of my monthly news column, I always asked our members to contact me with any complaints, suggestions or ideas. In the past 12 months I have only received three emails with ideas and thankfully no complaints.

Our Tech Committee is making progress on the upgrading of our antenna system. Hopefully it will be done before the year is out.

Please note that our November Kawfee Tawk was to begin at 7 PM, presented by Chris KE2NJ, talking about doing POTA in Ireland. The regular business meeting was to start at 7:30 PM.

However, Chris got held up at work and had to cancel at the last minute. Therefore, Chris will try again for the January meeting. It will begin at 7PM with the meeting starting at 7:30pm.

Our annual Auction went quite smoothly, other than having less than a dozen sellers. Check-in went more smoothly than in past years, and everyone got a door-prize ticket – with three valuable gift certificates won.

Keep an eye out for upcoming contests that the club is going to participate in. Check out our Website and PLEASE READ I.O. group messages for the latest information.

So please think about becoming a more active member and being part of a terrific club! PLEASE reach out to me or anyone on the new Board if you have an idea or a complaint.

73, HAPPY NEW YEAR,

Gene, WO2W

Our 2025 Hamfest Sponsors

AF7KB Books

https://fasttrackham.com/

https://ARRL.org

DX ENGINEERING
www.DXEngineering.com • 1-800-777-0703

Kantronics

https://kantronics.com/

Powerwerx

https://powerwerx.com

We very much appreciate the Sponsorships and Door Prize Donations received from the groups and companies whose logos are shown above.

Mother Seton Regional High School Joins the ARRL School Club Roundup

— reported by Randy AC4FD

Mother Seton Regional High School in Clark, NJ proudly participated in this fall's ARRL School Club Roundup, marking the school's first entry into the national amateur radio event.

The Mother Seton Regional Amateur Radio Club (W2MSR) was founded in Spring 2025 by senior Ysabelle Frum KD2WGB (a member of the Fair Lawn Amateur Radio Club - FLARC), with help from her father, Randy Frum AC4FD.

Since its formation, the club has grown to 10 active members, including one newly licensed operator and another waiting on their license once the government shutdown concludes.

Under Ysabelle's leadership, the club meets monthly and has already held several hands-on activities, including fox hunts, electronics projects, and now radio contesting through the School Club Roundup.

For the event, the team set up an IC-705 transceiver paired with a Xiegu XPA125B amplifier (100W), 100 feet of LMR400 coax, and a 40-meter end-fed wire antenna supported by a 19-foot carbon fiber mast. Power for the setup came from an Eco-Worthy 12.8V 20Ah LiFePO4 battery.

Club members operated the station after school for about an hour each day. Early in the week, they enjoyed operating outdoors at a picnic table; but as temperatures dropped and the wind picked up, operations moved indoors to the cafeteria.

While the cafeteria setting introduced some background noise, it also attracted curious students who stopped by — and even got on the air to make their first contacts.

Ysabelle called the event "a complete success" for the new club. "Every club member was able to make at least one contact," she said, "and it sparked a lot of new interest from other students."

The team is already looking forward to taking part in the Spring ARRL School Club Roundup — and making even more contacts next time around!

[Editor's comment: Maybe they will join FLARC next June for a 'real' Field Day operation!]

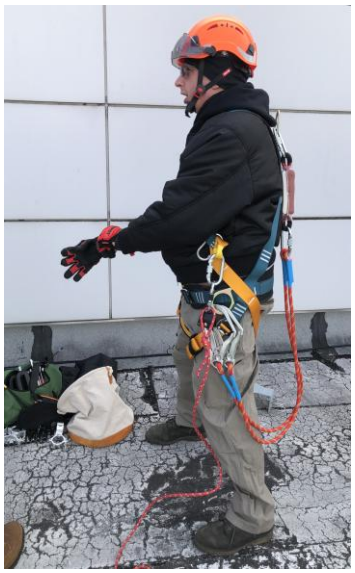
New to Ham Radio, members of W2MSR operate their first contest station.

By next spring, we might be hearing W2MSR from some POTA sites !

Honoring a Dedicated Club Member

— reported by Jim W2JC

I'm going to use this space to honor our member Louie N2NVE for his dedication to the club, saving the club probably several hundred dollars by the work he did for us on Tower #2 Sunday, December 7th.



There are several plans for Tower #2 which have been developed by the Technical Committee over the past year or so:

- Install a combined 10 meter/6 meter beam
- Replace the repeater's vertical antenna

Installing the beam requires adding a rotator platform plate, as well as a "thrust bearing" plate, inside the tower structure. In addition, the present configuration of the repeater vertical antenna would obstruct the rotation of the beam (which is not small!). Therefore, the vertical antenna will have to be mounted on the main mast, above the beam.

The weight and height of the current repeater antenna precludes mounting it on the main mast along with the 10m/6m beam, so it had to be replaced with a lighter weight design.

Installation of the 10m/6m beam is a project that calls for a professional tower team that "knows the ropes" and is insured for that work. The club has made plans with such a tower team, but their work is charged "by the hour." So any preparation work that we can get done ahead of time reduces the final cost of having the professional work done.

The planned preparation work included:

- Lowering the mast attached to the tower, which held the older repeater antenna;

  (due to clever planning by the team that installed the mast and antenna a few years ago, the mast is hinged at the bottom and there is a cable and winch that enables tilting the mast over for maintenance. But, to do this, someone has to go up the tower and disconnect several brackets to release the mast).

- Remove the older repeater antenna that was clamped onto the mast;
- Temporarily attach the new vertical antenna to the mast (so the repeater can continue to be used!);
- Winch the mast back into position, and reconnect the several brackets on the side of the tower;
- Install a heavy steel plate, with a very heavy-duty bearing assembly and clamps, near the top of the tower – making sure the plate is perfectly horizontal;
- Install another heavy steel plate, on which the rotator motor will be mounted, further down inside the tower – again making sure it is perfectly horizontal.

This work began shortly after 10:00 a.m. and continued until about 3:30 p.m. and Louie was ON the tower most of that time, with his climbing harness and all his tools and his BARE hands – the temperature was below 40F all that time. Because much of the work involved small hardware pieces, it was not practical for him to wear gloves.

Beginning to lower the mast and older vertical antenna

The assembled 10/6m beam waiting for the professional tower team to install.

Continued on next page.

Honoring a Dedicated Club Member, continued

On the way up the tower

Indoor photo thanks to W2KBF

All other photos by W2JC

Thanks also to the rest of the support crew that spent the day on the roof –

Dave	WO2X
Steve	WI2W
Doug	KE2FWN
Noel	W2MSA
Nelson	KD2BVZ
Jim	W2KNG
Jim	W2JC

and of course,

Louie	N2NVE

A threaded nut dropped from the tower – but where the heck is it?

At the top of the tower, prepping to install the thrust bearing plate

Holiday Party Entertainment

During our Holiday Party we were treated to several tunes played, and sung, by Karl W2KBF.

Photo by Nelson KD2BVZ

Photo by Van W2DLT

Drones SIG Report

Editor's note: At the November club meeting, Henry KB2BEE proposed that we have a new Special Interest Group (SIG) for those interested in Drones. Aside from the common interest in drones themselves, there can be many uses for small drones in Ham Radio – not the least of which are getting antenna ropes high in trees, and inspecting existing antennas for damage. When Henry suggested the group, Avanti KC3DZG showed immediate interest as did several other members. A Slack channel has been set up for group discussion, and if good interest is shown, a special groups.io subgroup will also be set up.

2026 Dues are due now

New members: only $20 for your first year ! And if you sign up after October 1st you get next year free.

There are no changes to dues for the upcoming year. Renew now, and let us know what activities or features would make you more active with the club.

Please makes checks payable to:
"Fair Lawn Amateur Radio Club"
and send them to:

Fair Lawn ARC
– Attn: Treasurer
10-10 20th Street
Fair Lawn, NJ 07410

Please include a member application form with your $25 check regardless of your member status.
It can be found near the back of this newsletter.

EmComm SIG Updates

[Emergency Communications via Ham Radio]

Amateur radio operators use their training, skills, and equipment to provide communications during emergencies. Hams serve our communities when storms or other disasters damage critical communication infrastructure, including cell towers, and wired and wireless networks. Amateur radio can function completely independently of the internet and phone systems. An amateur radio station can be set up almost anywhere in minutes. Hams can quickly raise a wire antenna in a tree or on a mast, connect it to a radio and power source, and communicate effectively with others.

The Resonator Is Now Archived!

Ever wanted to search for something in *The Resonator*? Maybe a member profile. Perhaps a past Street Fair. Even who participated at Field Day in 2017.

Now you can. *The Resonator* has now been accepted as part of the Digital Library of Amateur Radio and Communications. DLARC is a project of the Internet Archive (the not-for-profit online library best known for *The Wayback Machine*.) DLARC is growing to be a massive online library of the past and present of ham radio and related communications. It is funded by a grant from Amateur Radio Digital Communications.

When you need to find something, go to: https://archive.org/details/flarc-resonator

You can use the search "text contents" field to do a full-text search on all issues or click "Date Published" to see them sorted by publication date.

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

http://apparel.FairLawnARC.org
http://auction.FairLawnARC.org
http://blog.FairLawnARC.org
http://calendar.FairLawnARC.org
http://events.FairLawnARC.org
http://exams.FairLawnARC.org
http://facebook.FairLawnARC.org
http://news.FairLawnARC.org
http://swap.FairLawnARC.org
http://tech.FairLawnARC.org
http://youtube.FairLawnARC.org

https://groups.io/g/FairLawnARC

The **FLARC EmComm SIG** is working closely with the NENJ-ARES group (North East NJ) to create an area-wide corps of well prepared hams who can handle emergency communications accurately and efficiently.

Times have changed and we can now use digital message formats as well as voice messaging.

If you would like to learn more about this phase of ham radio, send an email to —

main+owner@NENJ-ARES-EMCOMM.groups.io

or contact Jim N2JLF at N2JLF@arrl.net

The Fair Lawn Amateur Radio

Why is FLARC New Jersey's Most Exciting Radio Club?

Annual and Special Events

- Field Day
- Winter Field Day
- World Amateur Radio Day
- Portable Day
- Earth and Environmental Days
- Field Trips
- Club Exchanges
- Special Even
- Public Service Activities
- Public Events
- Ham fests and Auctions
- Foxhunts
- Contests
- Youth Activities and more

There Is Something Every Night At FLARC!

Monday: Near and Far Net
Tuesday: DMR Net and Open House at the clubhouse
Wednesday: ARES/RACES Net
Thursday: Tech Net
Friday: Open House at the clubhouse or *Kawfee Tawk* Speaker Series (Monthly via Zoom)
Weekends: Open House at the clubhouse, POTA and other station activations, Contests, Foxhunts

Special Interest Groups

- Portable Ops (POTA, SOTA, etc.)
- DX: Chase the rare ones
- Digital Voice: DMR and other modes
- FT8: Plus, other WSJTX modes
- Satellite: Also, for weather interests
- Monitoring: SWL and other listening
- Contesting
- EMCOMM
- Radio Direction Finding
- Raspberry pi, Arduino

Plus:

- A five-position operating station clubhouse
- An active repeater—W2NPT linked with NJ2BS.
- New antennas on the roof
- Monthly VE testing
- An award-winning newsletter
- Monthly speaker programs
- Educational programs and activities
- Active in-person and social networking
- An extensive video education archive

That is Why FLARC Is the Most Exciting Club Around!

Come join us in-person or via Zoom for more activities, speakers, and projects!

www.fairlawnarc.org

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night, except when there is a Business Meeting scheduled, from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

2026 Officers, Committees and Assignments		
President	**Nomar Vizcarrond**	**NP4H**
Vice President	**Gene Ottenheimer**	**WO2W**
Treasurer	**Bob Antoniuk**	**N2SU**
Secretary	**Jim Cooper**	**W2JC**
Trustee	**Lowell "Van" VantSlot**	**W2DLT**
Trustee	**Noel Pagan**	**W2MSA**
Trustee	**Skip Barker**	**KD2BRV**
Member Services ***Health & Welfare***	**Judith Shaw**	**KC2LTM**
Marketing	**Nomar Vizcarrondo** **Jim Cooper**	**NP4H** **W2JC**
Program	**[open]**	
Video/YouTube	**[open]**	
Social Media	**Brian Duddy** **Thom Guida** **Dave Marotti**	**N2BTD** **W2NZ** **NK2Q**
Photographer	**Robert Marchini**	**KD2SOG**
Community Relations	**Gene Ottenheimer** **Dave Gotlib**	**WO2W** **KD2MOB**
Field Day 2026	**[open]**	
Winter Field Day 2026	**[open]**	
Hamfest	**[open]**	
Auction	**[open]**	
Education	**[open]**	
Youth Outreach	**Robert Marchini**	**KD2SOG**
Adult Outreach	**Lowell "Van" VantSlot** **Jim Cooper**	**W2DLT** **W2JC**
VE Testing Coordinator	**Gene Ottenheimer**	**WO2W**
Special Events	**James Gallo**	**KB2FMH**
Contests	**Lowell Vant Slot**	**W2DLT**
FLARC Historian	**Fred Belghaus**	**KR2H [W2AAB]**
Webmaster ***Asst. Webmaster***	**Jim Cooper** **David Kozinn**	**W2JC** **K2DBK**
Technical Chair	**Dave deCoons**	**WO2X**
EmComm ***RACES/ARES Director*** ***RACES/ARES Liaison***	**Jim Breheny** **Dave Gotlib** **Steve Wraga**	**N2JLF** **KD2MOB** **WA2BYX**
Newsletter Editor ***Newsletter Publisher***	**Jim Cooper** **Jim Cooper**	**W2JC** **W2JC**
Club Station Manager	**Noel Pagan**	**W2MSA**
Quartermaster	**Fred Wawra**	**W2ABE**

Want a Call Sign License Plate?

Amateur Radio (Ham operators) license plates may be purchased for a $15 fee, for passenger vehicles, but not for commercial vehicles or motorcycles. (Applicants must be licensed by the Federal Communications Commission.)

Call MVC at 609.292.6500 or (toll free in NJ) 888.486.3339 to request an application.

The club has applications from time to time. If you would like an application, visit the "contact us" page, and we'll get one out to you.. Or find the form and detailed instructions at:

https://www.state.nj.us/mvc/pdf/vehicles/SP-23.pdf

Letters: A feature of *The Resonator*

The editor has received a lot of nice notes, letters and comments about this newsletter and the club in general. We have not published them in the past but going forward we will at least try.

Here are the grounds rules:

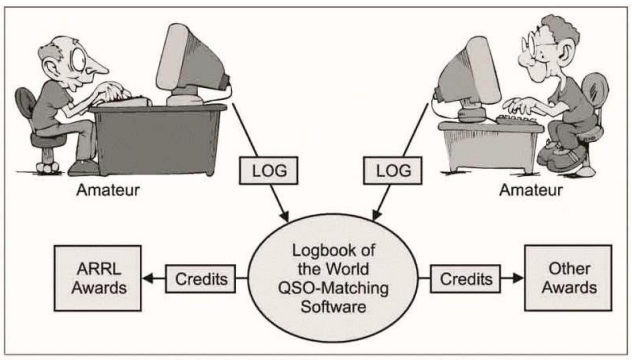
- *Please keep all comments as brief and succinct as possible.*
- *No personal attacks.*
- *No political rants.*
- *No comments promoting violence, racism, religious intolerance, vulgarity, obscenity, or other such discourteous behavior.*
- *The Editor reserves the right to exclude any comments that violate our guidelines and may subject the writer to further disciplinary action by the club.*

A QSL card is the final courtesy of an amateur radio contact.

https://en.wikipedia.org/wiki/QSL_card

INCOMING QSL Bureau -- if you have been making on-the-air contacts, you might very well have a package of exciting QSL cards from around the world waiting for you at the incoming QSL Bureau. If you previously received cards from them, check to see if you have any "credits" left by going to https://www.njdxa.org/?page_id=869 If you never contacted them, they probably have cards for you! Go to this page -- https://www.njdxa.org/?page_id=25 and get some 'credits' to cover the postage for mailing your cards to you.

To learn about the W2 Bureau, https://www.njdxa.org/?page_id=30



Those who upload logs to Logbook of the World become eligible to redeem confirmation credits for awards. LoTW wants and needs *all* logs. Uploading is free, so send your logs today!

Follow FLARC ON THE WEB

Facebook: http://facebook.FairLawnARC.org

Twitter: @FairLawnARC

Youtube: http://youtube.FairLawnARC.org

Website: http://FairLawnARC.org

SIG Group Membership

Here is an update on the Special Interest Groups… many groups have increased in size during the last month. About 45% of all members have joined at least one group.

SIG Name	Leader
Contesting	W2DLT
Digital Voice	N2AAM
Drones *	KB2BEE
EmComm	N2JLF
Meshtastic *	W2KBF
Monitoring	WX2R
DX	W2JC
FT8	W2JC
Satellites	N2AAM
Portable Ops	W2MSA
Radio Astronomy	WX2R
Raspberry pi	[open]
Direction Finding	W2KBF

* **New group**

Sign up for a group... or … why not start one?

Contact webmaster@FairLawnARC.org if you would like to start a new Special Interest Group.

The Clubhouse Is Open THREE Fridays In December!!

Date	Clubhouse Status
Dec. 5	CLOSED – Holiday Party at Fair Lawn Senior Center
Dec. 12	OPEN
Dec. 19	OPEN
Dec. 26	OPEN

Pop-Up Tuesdays are in-person at the club.

Winter Field Day

— by Noel W2MSA

Winter Field Day 2026 weekend is just around the corner. FLARC is now registered on the WFD locator map. Unfortunately we will not have the luxury of using the Pompton Lakes Communications Van this year, but that won't stop us from participating in the event.

Below are some helpful links of the Winter Field Day website; there you will find the answers to all your questions regarding this event, so please take some time out to check it out.

We usually operate three stations from Memorial Park (the same location we do the June FD).

I would like to beat our score from last year. Look out for future updates and email me if you are interested in participating.

- Winter Field Day
https://winterfieldday.org/index.php

- WFD Rules
https://winterfieldday.org/sop.php

- WFD Resources
https://winterfieldday.org/resources.php

FLARC November 15, 2025 VE Testing Results

Gene **WO2W** reports the following results:

Name	Call	License Earned
Louis Yacono	**N2NVE**	**General**
Michael Tolsma		**Technician**

Testing for next month will be at the Fair Lawn Recreation Center.

Twelve Special Interest Groups [SIGs] Already Formed: Any Others?

Club interest continues to grow in the SIGs.

Another recently formed SIG is for those interested in Raspberry Pi and Arduino projects, but now includes DoItYourself (DIY)/Makers kit building, 3D printing and similar topics.

A list of all of the current SIGs is shown on page 9.

Other possible groups, from the member survey, include:

- *Radio Propagation*
- *Antennas and how they work*
- *Ham radio software*
- *Technical assistance to club members*

Anyone interested in leading any of these groups…?

Please contact webmaster@FairLawnARC.org

Vast Archive of FLARC Activities and Info

Members are reminded that we have a large archive of YouTube videos of our previous many years of Kawfee Tawk™ presentations, which cover many aspects of ham radio. Our mostly unsung hero club videographer, Thom W2NZ, has spent thousands of hours of his own time creating really professional quality videos of these 167 presentations. Visit our club YouTube page and you will see all of them listed on the main page, at http://youtube.FairLawnARC.org

Another large and rather unused archive is that of our seven years of the club newsletter, The Resonator. They provide a nice historical record of the many activities of FLARC over the years, as well as lots of useful info about ham radio and electronics. The entire archive is at http://newsletters.FairLawnARC.org

And don't forget the FILES area of our groups.io website, where useful and important info is saved:

https://fairlawnarc.groups.io/g/main/files

Renew Your ARRL Dues... Send Free Money to FLARC!

The ARRL has a great program to support affiliated clubs in that it sends part of your dues back to the club if you renew through the club.

So... when you get your ARRL renewal, send both your check and your renewal application to our trusty Treasurer, who will take care of getting your renewal to Newington and a fat check for $5.00 back to FLARC.

Nothing can be simpler...
you just have to remember!!

Print and use the form on page 21 of this issue of

The Resonator

Club Apparel — Get Them While They're RED!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.
Go to www.hamthreads.com
or visit http://apparel.FairLawnARC.org

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color**.**

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.

It's easy to spot FLARC members wearing their red club shirts !

Ham Radio Is Contagious And It Won't Make You Sick!!

2025 FLARC Net On The W2NPT Repeater:

Near and Far Net • Mondays at 8PM

W2NPT Repeater and EchoLink

Special Note: *The IRS now requires that we disclose annually the use of paid lobbyists to our members and indicate approximately what percentage of their dues goes toward that. 0% of your dues payment will be used by the club to directly pay a lobbyist firm to lobby on behalf of all our members regarding pending legislation that impacts our hobby. The ARRL does that for us.*

https://newhams.info/

BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such as gift is worthy.

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday, except when a Business Meeting is scheduled, at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM at the Fair Lawn Senior Center, and on Zoom**.**

Visitors <u>ARE ALWAYS</u> welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL **167.9**) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has nearly two hundred paid members.
Dues are currently $25 per year;
$20 for new members.

For more information, please see our website, at
http://membership.FairLawnARC.org

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This is YOUR club.... Be a part of it !!

FAIR LAWN'S COMMUNICATIONS CENTER!

With Our Antennas On The Roof!

Theoretics Demystified

This time we are talking about power supplies. These are a necessary part of testing, as a lot of operational failures of a device are due to power supply problems.

There are many types of power supplies used, depending upon the circuits being tested. Below is a high voltage supply for working with tube equipment, and has the voltages to power the heaters in the tubes. This supply even uses tubes as part of its circuitry.

The more common type of supply these days is the low voltage adjustable regulated power supply. Most are switching supplies, which means that the line voltage is changed to a much higher frequency to eliminate the expensive bulky 60Hz transformers.

The higher frequency transformers are much smaller, cheaper and more efficient. Below is a picture of one of these types of supplies.

As you can see, there are many adjustments for voltage output and current limiting (which helps to not burn up parts if the current requirement is not known).

Again, this type of supply uses switching technology which keeps costs lower and the number of design features more readily available. The only drawback is that they are very expensive, if not impossible, to fix the switching part of the supply if there is a failure. It is cheaper to buy new than pay for repairs, unless it is something very basic like a power switch.

Then there is an adjustable AC power supply called a **variac**. It controls the AC output voltage from zero to, in some cases, above the input voltage.

This type of device is used when you do not know if the device under test has a short circuit or even if you do not know the proper input voltage. This supply uses a circular transformer winding that a selector arm that travels across the winding, thereby selecting a voltage for the output.

In most cases there is no isolation between the input and the output, so the general thing to do for protection is to use an isolation transformer between the AC source socket and the variac. This protects the person testing something, such as an old AC/DC radio, from getting a shock from a fault in the item being tested.

As you can see, there is a voltmeter on the variac so you can set the output for a specific voltage. As an aside, some very old 'dimmers' in the wall were variacs. This was before the advent of solid-state devices.

Another common type of power supplies are the typical 'wall-wart' and the familiar brick type supplies used with computers, monitors, and other devices.

Fred Wawra, W2ABE, 73.

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Contest Corner

Reported by Van W2DLT

Karl W2KBF asks:

Have you seen the Field Day scores from the December 2025 QST?

W2NPT did not do too badly, taking 2nd place in the NNJ 2A category. If I read it correctly:

Morris RC (W2YO)
1075 contacts, 5414 points

FLARC (W2NPT/W2KAR)
676 contacts, 3490 points

444 DX Group (K2IN)
812 contacts, 3380 points

TriCo RA (W2LI)
160 contacts, 1670 points

Metutchen RC (K2YNT)
264 contacts, 1114 points

HamSCI

The Ham Radio Science Citizen Investigation (HamSCI) is seeking operators and monitors to participate in a series of upcoming meteor scatter (MS) experiments.

Operations will take place on December 12 - 13, 2025, over a 48-hour period — during the Geminids meteor shower.

This is a combination 'special event' and a contest to generate contact data during meteor scatter events using 10 meters (28.145 MHz) and 6 meters (50.260 MHz). Suggested operating procedures can be found at www.hamsci.org/msqp.

No special station equipment is required but the experiment uses the MSK144 operating mode as part of the WSJTX suite. The functionality is much like using FT8 and is easy to use.

For more information on the operating guidelines for the activity, visit www.hamsci.org/msqp-rules

HAMSPEAK

LINEAR POWER SUPPLY:

A power supply that uses a 60Hz transformer with a rectifier and a filter capacitor to smooth out the rectified DC voltage.

REGULATED LINEAR POWER SUPPLY:

A linear supply that adds a semiconductor circuit designed to keep the output voltage steady regardless of the load — within limits, of course.

SWITCHING POWER SUPPLY:

A supply that takes the AC voltage input and changes it to DC using passive components, then runs an oscillator at high frequency to step up the voltage and then rectifies that to DC again. This eliminates the costly and heavy 60Hz transformers.

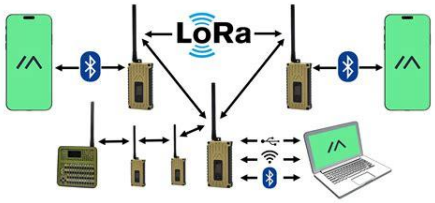
RECTIFIER:

A device that lets current flow in only one direction, thereby changing AC to DC. Before solid state devices, vacuum tubes were used.

CHOKE:

A transformer-like device (a coil) that is in series with the DC output in a power supply and is designed to smooth out the rectified AC voltage using inductive reactance parameters. The use of chokes has been largely replaced with solid-state regulator devices.

Fred Wawra, W2ABE, 73.



Meshtastic SIG Report

— by Karl W2KBF

A group to share and post information and ideas about the new topic of interest -- MeshTastic operations.

Editor's note: This is one of our newest SIG groups, and it has grown quickly. It's an odd area for hams to be involved, because it is basically an unlicensed operating band – so many of the stations (nodes) that are active are not hams, they are just 'neighbors.' But the word is going around that this mode might be useful for EmComm when internet, cellphone and VHF/UHF ham gear are not available or functioning. More info on what it is all about will appear here in the future, I'm sure. However, this month we have an 'essay' from W2JC on the possible use he sees for Meshtastic and EmComm.

Essay on Meshtastic for EmComm

— by Jim W2JC

Meshtastic seems to have captured the interest of many FLARC members recently, probably for a number of reasons.

It's "new"… it's a challenge…
it might be good for EmComm.

After catching the bug, and getting started with the tiny Heltec V3 which W2KBF drew attention to, I've been playing around with Meshtastic for a couple of months now and new nodes seem to be popping up faster and faster.

Remember, Meshtastic in the common 915MHz band is _not_ a ham band, and operation does not require any type of FCC license. That doesn't mean hams can't use it, since its open for anyone to use. However, power is severely limited (in milliWatts) – though it is quite surprising how far such UHF signals can travel.

The concept is that this mode is ONLY for short text messages, which can be sent to "everyone" or addressed to a specific node (station). What makes it special is that when a node receives such a message "packet" it will, generally, repeat/relay that message to everyone else. Using such "hops" from one node to another, a text message can travel relatively far from the source.

At the present time, from monitoring that I've done, there is little useful "traffic" even on the public channel – many blank messages, others asking if their message is going anywhere, and once in a while someone testing from various locations attempting to see how the coverage is. It's sort of like a retro "Citizen Band" for only text! BUT it provides similar fascination as HF SWLing did for most of us hams when we first got started… what stations can be detected, and how far away can they be detected from?

I must confess, I find this to be a fun aspect; so far, here in Paramus I've detected almost 350 different nodes -- the farthest, via several hops, is 29 miles away.

However, my point in writing this essay is to expand on the apparent reason most hams have taken interest in Meshtastic – which is the EmComm (Emergency Communications) possibility of exchanging information without the need for the internet or power grid.

It's becoming apparent, to me at least, that this is a very specific application of the Meshtastic concept and network – which, if we apply it within the limitations, could actually be a good adjunct to our radio EmComm communications.

For EmComm text messages, we hams now have WinLink which is very effective for formal message exchange; but it requires a computer, special software, a special interface between the computer and the radio, and some procedures for creating the WinLink messages.

It's not particularly suitable for short, real-time interaction.

Meshtastic is very low power (milliWatts) so a fairly small battery works for quite a long time, and it is not much of a challenge to use a solar panel to keep the battery charged. Many of the small units available require coupling with a cell phone (or computer) in order to create the text to be sent; but there are a few recently available which have a built in screen and keyboard, so they are 'self-contained' and very portable.

Here's my idea for the use of Meshtastic for local EmComm when internet and commercial power are not available:

Continued on next page.

Meshtastic SIG Report, continued.

If/when we hams are deployed in an emergency, to support Red Cross or another agency, we're mostly dealing with a fairly small geographical area …

- State-wide
- County-wide
- Municipal
- Local Shelter

Meshtastic provides one "public" channel that is broadcast to all nodes that are monitoring that channel. But it also provides seven other channels that can be configured for "private" or "group" chat.

Channels could be set up for the various levels listed above, or by functions such as --

- Field (coverage over Meshtastic range)
- Crew (just an individual group, such as those working within a shelter)
- Tactical (such as between those "running the show" –Command level, if you call it that.)

Because all these groups would be within direct contact with each other, there would be no need for "hops" and each channel would act like a real-time "chat channel" between that operational group.

The main requirement to set this up is that every node needs to be set up with the same channel settings and passphrase and mode. Not hard, but needs to be coordinated.

We could start this concept by setting up one of the seven channels as a FLARC club chat channel. During "safe" times we have basically the same function with our Slack channels, but they won't work if the internet and/or cell phones are not available. The feature of Meshtastic is that it is an "off grid" backup system.

Maybe the FLARC Meshtastic SIG group would want to try this as an experiment. We have 15 members in the groups.io subgroup, and we have 9 members in the Slack sub-channel at present.

This experimental Meshtastic channel would give us experience in setting up a special channel, and using it – which could then be expanded to the EmComm channels suggested above.

-- W2JC

Response from Jim W2KNG

One of the purposes for the existence of Amateur Radio as stated in Part 97 of Title 47 Code of Federal Regulations is —

> "Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications."

Amateur Radio has always been under attack, even more so in recent years due to the expansion of radio spectrum use cases (for example high frequency trading on Wall Street). Powerful forces and lobbies (with plenty of money) covet our precious slice of frequencies. We need to make the case for amateur radio in every way we can as often as we can.

To the extent clubs like FLARC experiment with technologies such as Meshtastic and Meshcore it has to help a little. Even if after testing and evaluating Meshtastic, Meshcore and related technologies we decide: no, IT doesn't work, not for us, there are systems and protocols better suited for public service and emergency communications.

That's fine. It's what amateur radio operators are supposed to be doing. That alone is a valid use case for Meshtastic. Hams are in a vastly superior position to make those evaluations than non-licensed members of the general public.

The point is: "yes, we still do that" and yes, we take our obligation to public service seriously.

Evaluating Meshtastic is in the finest tradition of amateur radio.

— Jim W2KNG

Meshtastic SIG Report, continued.

MeshCore vs Meshtastic — Understanding the Difference and Choosing the Right Platform for Amateur Radio Use

In recent years, low-power digital mesh networking has become increasingly popular among amateur radio operators.

Two platforms now dominate the conversation: Meshtastic and the newer MeshCore framework. While both technologies create decentralized, short-burst, low-bandwidth communication networks, they differ substantially in design philosophy, reliability, and suitability for structured amateur-radio use. Understanding these differences helps clubs choose a platform that aligns with their goals, technical expectations, and long-term reliability needs.

Meshtastic is a well-known open-source project built around inexpensive LoRa hardware. It provides message routing, basic GPS sharing, position beacons, and text communication between nodes – often using pocket-sized consumer devices.

Its appeal comes from easy onboarding, wide adoption, and a friendly ecosystem of handheld nodes, T-Deck devices, and DIY builds. For experimentation and casual use, Meshtastic offers a plug-and-play experience with minimal technical requirements. However, the platform can suffer from firmware fragmentation, channel and slot inconsistencies, encryption restrictions for amateur-radio operation, and variable performance across different hardware revisions. These variations sometimes lead to reliability issues, especially in large or mixed-device networks where firmware alignment cannot be guaranteed.

MeshCore takes a different approach. Rather than focusing on consumer-friendly interfaces, it emphasizes a stable, modular core designed for predictable networking behavior. MeshCore abstracts the radio layer from the networking layer, creating a consistent and deterministic environment for routing, timing, and message handling.

Unlike Meshtastic, which often ties features directly to radio presets and firmware revisions, MeshCore keeps the core protocol lightweight, hardware-agnostic, and repeatable across devices. This results in cleaner coordination among nodes, improved interoperability, and less drift between installations. MeshCore is geared toward operators who need dependable communication under controlled conditions, such as public-service events, emergency support, or structured club deployments.

Use cases for Meshtastic often revolve around informal coordination: hiking groups, off-grid messaging, hobby experimentation, and ad-hoc local networks. It excels in low-commitment scenarios where devices may appear or disappear from the mesh at any time, and where features like phone integration and mobile apps are beneficial.

MeshCore, by comparison, is designed for scenarios where consistency matters more than convenience. Amateur-radio clubs can deploy MeshCore for event logistics, perimeter coverage, spot-report networks, or as an internal digital backbone for voice-auxiliary systems. Its predictable timing and routing behavior make it far more suitable for nodes that must remain synchronized for long periods and operate without user intervention.

Both platforms are valuable to the amateur-radio community, but the reliability needs of club operations often point toward MeshCore. While Meshtastic is more widely known and offers a larger ecosystem, it can suffer from uneven performance due to its rapid development cycle and diverse hardware environment.

MeshCore provides a more controlled protocol, improved stability across mixed hardware, and a clearer deployment model for permanent or semi-permanent installations. For clubs looking to build a dependable digital mesh — whether for public-service events, field exercises, or coordination during emergency scenarios — MeshCore offers the consistency, repeatability, and long-term reliability that structured amateur-radio operations require.

The FLARC Meshtastic SIG has been experimenting with Meshtastic for some time now, and will soon be doing the same with MeshCore. We now have a solar powered Meshtastic unit mounted on Tower #1, which is providing good “relay service” to Fair Lawn area.

— Louie N2NVE

ELECTRONIC DUES PAYMENTS ARE NOW AVAILABLE!

FLARC dues, new and renewal — and even donations! — can now be made on-line …

Until permanent arrangements can be made, several fiduciaries of the Fair Lawn Amateur Radio Club have graciously agreed to forward electronic payments to the Club's bank account.
Payments can be made using Zelle account.

- Log into your Zelle account
- Use the following phone number as the recipient: 201-240-9317
- In the notes section, include your Call Sign and what year(s) the dues are for

Once complete, you may – for added assurance - send a screenshot to treasurer@FairLawnARC.org

– please be sure to redact any personal information –
(e.g. bank account number, balance, etc.)

For both new and renewal, please complete the Membership Application form at https://FairLawnARC.com/membership.pdf
with your current info and either give it to a club officer
or mail it to the address on the form.

For additional information on club membership, visit
http://membership.FairLawnARC.org

Visit the club website at http://FairLawnARC.org for info about the club, club activities, club history and our club 2-meter repeater.

For a PDF form that can be filled in on-line, then printed and mailed with check, CLICK HERE

Or you can print this page, fill it in and mail to the address shown at the bottom.

Fair Lawn Amateur Radio Club

Fair Lawn Recreation and Community Center
10-10 20th Street
Fair Lawn, N.J. 07410

MEMBERSHIP/RENEWAL FORM

Name_____ **Call** _____

Address_____ **PO Box**_____ **Ste./Apt #**_____

City _____ **State** _____ **Zip** _____

Roster Published Phone #_____ **Unpublished Phone #**_____

Roster Published EMAIL _____ **License class:** _____

Check all that apply **ARRL Member ?** **RACES Member ?** **ARES Member ?** **CERT ?** **VE ?**

Additional Family Members (In same household) --

Name_____ **Call** _____

Name_____ **Call** _____

Introductory and Student Membership (Students under the age of 18 eligible for student membership) (Introductory membership open to new members or not a member in last 7 yrs)	**$ 20**	**$**_____
Associate Membership *	**(No Fee)**	
* Open to Fair Lawn Residents Only. No voting rights or other privileges.		
Renewal of Current Membership	**$ 25**	**$**_____
Three Year Renewal Incentive	**$ 65**	**$**_____
(Single memberships only, family memberships excluded)		
Additional Family Members #_____ **at**	**$ 5 each**	**$**_____
Life Membership	**$ 625**	**$**_____
Senior Life Membership (65 yrs. of age or over)	**$ 250**	**$**_____
Equipment Fund Donation, above regular membership dues		**$**_____
		==========
	Total submitted	**$**_____

_____ **Date**_____

I hereby acknowledge the By laws and rules and regulations of the club and will abide by them as amended

Please Note: Memberships are NOT Pro-Rated. Membership is from Jan 1st to Dec. 31st of any given year unless documented otherwise.

Please make your dues check payable to the "Fair Lawn Amateur Radio Club" and remit to the following address:

Fair Lawn ARC
– Attn: Treasurer
10-10 20th Street
Fair Lawn, NJ 07410

Complete this form for NEW or RENEWAL of ARRL membership and give to FLARC Treasurer with your payment check.

ARRL The National Association for Amateur Radio®

Membership Application

☐ **New** ☐ **Renew** ☐ **Previous Member** ☐ **Unlicensed**

Name _____ Call Sign _____

Address _____

City _____ State _____ ZIP _____

Email _____ Phone _____

Date of Birth _____ / _____ / _____

My Family Member is Joining or Renewing: ($12 per member)

Name _____ Call Sign _____

Name _____ Call Sign _____

☐ Please note my new address ☐ I do not want my name and address made available for non-ARRL related mailings

Your Annual Membership Dues*

Circle Your Choice (rates effective Jan. 1, 2024)

	1 Year	3 Years
Standard membership	$59	$174
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...and more!

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membership@arrl.org • www.arrl.org/join

CLUB
form rev 1/24

December 2025
FLARC Business Meeting Minutes

A short business meeting was conducted prior to the annual Holiday Party.

Treasurer KD2SOG gave his report, beginning with noting the profit we made from our annual auction. Some expenses paid during November included $50 for temporary insurance coverage for our ISS Space Station contact at the Paterson P-Tech school, and also the $500 allocated for cost of the Holiday Party. WO2X was reimbursed $306 for the cost of the hardware for linking our repeater to the Alpine repeater on 440MHz. WO2X has advised that he is contributing the additional cost to upgrade the equipment to include various DVR Digital Voice Recording features, for voice announcements over the repeater(s). KD2SOG indicated that some members have already paid their 2026 dues, but reminded all members that dues are due for 2026 and can be paid at any time now. Income of $150 was received from WO2X for an antenna he purchased from the club.

Motion to accept Treasurer's report was made and seconded and passed unanimously.

President WO2W then mentioned the club's management of the October **Amateur Radio** on the International **Space Station** (**ARISS**) contact with the International Space Station, done at the Paterson NJ P-Tech School planetarium, and called up five club members who were instrumental in making that event happen flawlessly -- Doug Faley KE2FWN, Robert "Skye" Marchini KD2SOG, Noel Pagan W2MSA, Steve Holly WI2W and Ria Jairam N2RJ. Ria was unable to attend the meeting, but the other four came forward and received framed certificates of appreciation. President WO2W said: "There was a fifth person involved who was a major, major ARISS person. And that was Ria N2RJ. She thought she was going to make it tonight, but I don't see her. So, we will get this certificate up to her. I just want to give a big thanks to Doug, and to Noel, and to Skye, and to Ria. They really stepped up. We had a pretty debatable schedule, and they just made time to be there. Everybody just picked up and did the work with really great team effort."

ARISS crew with appreciation certificates
L-R: W2MSA, KD2SOG, WO2W, WI2W, KE2FWN

Next, President WO2W announced the winner of the FLARC Amateur of the Year award was Steve Holly WI2W -- saying: " ... this year, we're giving that award to one of the outstanding members. Mr. Steve Holly. He's done a lot for the club, volunteering, working on the technical committee, and stuff. So, the Board thought it was long overdue that he is recognized." Steve was presented with the trophy clock which has become the recognition piece for this award.

Dave WO2X, chairman of the Technical Committee, then gave a report. "A couple of updates have been done. One of the things that the club wanted, the club is now set up with AC Log and N1MM+ to do CW keying automatically for contests. So, next time we're doing a CW contest at the club, the radios ares all set up. We also put an external monitor on Position 1 so you can see the display better.

Continued on next page.

December 2025 FLARC Business Meeting, cont'd.

The controller for the repeater is ordered and should be shipping early next week. I'm hoping next week to get that installed and get it linked up to the 440 repeater up in Alpine, which will extend the coverage for a lot of our members that cannot hit the 2 meter repeater. So, I'm hoping to get that completed next week. That's about all I've got right now. Thank you."

After calling for old business, President WO2W said: "Last month, we talked about putting a meshtastic node on Tower #1. There was some discussion about it. I just want you to know that that was installed about two weeks ago by Louie and two other members on the tower. 'W2NPT Solar' has been on the air for some time now. Thank you."

Further for old business, President WO2W said:
"One more thing, Mr. Secretary. I need you to cast a vote. One vote for next year's officers, please."

In response, Secretary W2JC reported:

"Next year's officers were nominated by the nominating committee. There were no challengers to the nominations. So, the president for 2026 is November Papa 4 Hotel. NP4H

The vice president is Whiskey Oscar 2 Whiskey. WO2W

The secretary is Whiskey 2 Juliet Charlie. W2JC

The treasurer is November 2 Sierra Uniform. N2SU

Retaining his position as trustee is Whiskey 2 Delta Lima Tango. W2DLT

Also retaining his position as trustee is Whiskey 2 Mike Sierra Alpha. W2MSA

And the new trustee for the next three years is Kilo Delta 2 Bravo Romeo Victor. KD2BRV

And I will cast one vote for each of them making it unanimous and official."

A motion was made, seconded and passed unanimously to close the meeting.

The annual Holiday Party followed the Business Meeting.

Submitted by Jim Cooper, W2JC -- FLARC Secretary
[without the aid of Zoom AI this month!]

Treasurer's Report on next page.

December 2025 FLARC Business Meeting, cont'd.

Summary of Treasurer's Report for December 2025

Firstly, our fiscal position remains excellent. Our current bank balance reflects an increase of $777.87 from past month's balance. This is also a decline of $238.93 from our 2024 start balance. The main reason for the large delta Month over Month is the deposit of the proceeds from our auction.

Our auction was a success. We made a total of $611.33. I'd like to thank all who participated in organizing it.

Several accounts were paid last month, including: $50 for our insurance for the Space Station contact event in Paterson, $500 for the food here tonight (an increase of ~$200 over last year) and $306.98 to Dave WO2X for the new antenna linking system for our project to link to the Armstrong Tower repeater. I will also be writing a check to Gene WO2W this week for auction food and antenna hardware.

On the income side, we have had many members begin their renewals, as dues are due by Jan 1. We also got paid for an antenna purchased from the club by Dave WO2X for $150. Last month we had 135 total members. We also drew down the Zelle account held by Bruce NJ2BK and moved that into the main FLARC account.

Our petty cash fund remains unchanged since June. As a reminder, we also have a coffee fund in the pot next to the Keurig in the clubhouse. "If you have a cup, give a buck."

As a reminder, we had over $2100 in capital expenses this year, which leads me to assess (as I have said many times) that our fiscal trendline is in excellent shape, and we continue to operate in-the-black. I appreciate the opportunity to serve as your treasurer and look forward to passing the organization's sound checkbook to the new Treasurer at the end of this year. I will deliver my final report, 12 months of statements, and all the other treasury records by 31 Dec.

Secondly, and related, I have begun the process — with Jim W2KNG — of shifting the club's assets to our new Incorporated association. As a reminder, this provides significant benefit to the club, including legal protection of our assets (most notably, all of our radios), as well as the capacity for our bank balance to earn interest. This is ready to go now, and we are fully registered with the IRS as a 501c7 income tax exempt organization.

Thirdly, and finally, it is quickly becoming time to renew your membership in FLARC! Our Secretary and I have been working to send out a reminder email to all members whose membership is expiring. There are 58 members expiring at the end of 2025. All FLARC memberships run for the calendar year. The key reason that FLARC is such a successful club, with so many programming events, is the continued active participation of so many members.

— Submitted by Skye KD2SOG, FLARC Treasurer